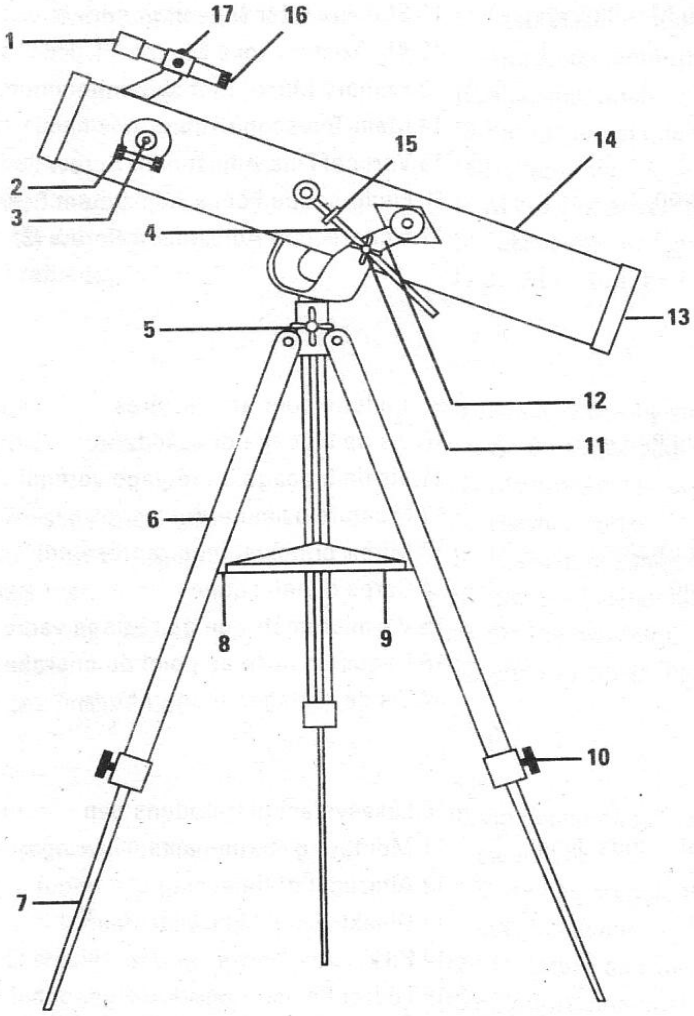
Operating Instructions
Mode d'emploi
Bruksanvisning
Bedienungsanleitung
Návod k obsluze
Istruzioni per l'uso



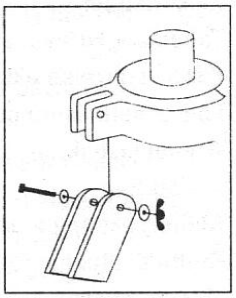


fig. 1

1. Finderscope
2. Rack & Pinion Focusing Mechanism
3. 0.965" Format Eyepiece
4. Vertical Stabilizer Bar
5. Azimuth Lock Screw
6. Tripod Leg
7. Tripod Leg Middle Section
8. Accessory Tray Brace
9. Accessory Tray
10. Tripod Leg Lock Screws (GB)
11. Stabilizer Bar Mounting Screw
12 Alt-Azimuth Yoke Mount
13. Primary Mirror (not shown)
14. Main Telescope Tube
15. Vertical Fine Adjustment Screw
16. Finderscope Focus Adjustment Screw (3)
17. Finderscope Adjustment Screw (3)

1. Chercheur
2. Mécanisme de mise au point à crémaillère
3. Oculaire (0,956")
4. Barre de stabilisation verticale
5. Vis de blocage azimutale
6. Trépied
7. Branche télescopique
8. Support de tablette
9. Tablette pour accessoires (F)
10. Vis de blocage des pieds
11. Vis de blocage du réglage vertical
12. Monture azimutale
13. Miroir principal (non représenté)
14. Corps du télescope
15. Vis micrométrique de réglage vertical
16. Bague de mise au point du chercheur
17. Vis de réglage du chercheur

1. Kikkertsøger
2. Tandstangsdrevet afstandsindstilling
3. 0,965" størrelse okular
4. Lodret stabiliseringsstang
5. Azimut låseskrue
6. Trefod-ben
7. Midtersektion på trefodsben
8. Støtte til tilbehørsbakke
9. Tilbehørsbakke
10. Låsesystem til trefodens ben (DK)
11. Monteringsskrue til stabiliseringsstang
12. Altazimut gaffelbeslag
13. Objektivspejl (ikke vist)
14. Kikkertrør
15. Lodret finjusteringsskrue
16. Kikkertsøger afstandsjusteringsskrue (3)
17. Kikkertsøger justeringsskrue (3)

STANDARD EQUIPMENT:

(GB)

- 20 mm, 12.5 mm and 4 mm focal length – 0.965" diameter eyepiece
- 2X Barlow Lens
- Moon Filter
- Eyepiece adapter (24.5 – 31.7 mm)

TELESCOPE ASSEMPLY

1. Remove telescope from the carton and identify all components. READ THROUGH ASSEMPLY INSTRUCTION BEFORE YOU ASSEMBLY YOUR TELESCOPE

2. Set-up Tripod

Select one tripod leg and extend the tripod Leg Middle Section (7). Using the Tripod Leg Lock Screw (10) included in the hardware pack, insert a Tripod Leg Lock Screw into the lower brackets on the Tripod Leg (6). Tighten the Tripod Leg Lock Screws as that the Middle Section is securely in place. Repeat for the remaining two legs.

3. Attach Telescope and Finderscope

Locate the pre-assembled Telescope Main Tube (14) and Altazimuth Yoke Mount (12).. Note: Before assembling tripod legs to Altazimuth Yoke Mount, make sure the Accessory Tray Braces (8) face inward. Locate the long bolts and washers from the hardware pack. Position the mount over the Tripod Leg (6) as shown (fig. 1) and align the holes in the Tripod Leg with the holes in the mount. Insert the bolts through the holes at the top of a Tripod Leg. A washer should be positioned on both outer sides of the Tripod Leg. Attach a wing nut to the bolt, but do not tighten it all the way. Repeat on the remaining two Tripod Legs. Once you have attached all Tripod Legs to the mount, securely tighten all wing nuts. Remove the Stabilizer Bar Mounting Screw (11) from the hardware pack and insert it into the opening at the base af the Vertical Stabilizer Bar (4).

Locate ther Finderscope (1) with pre-assembled mounting bracket. Remove the two nuts located near the front of the telescope (closest to the eyepiece) and place the Finderscope and bracket assembly over the exposed screws. The Finderscope Focus Adjustment (16) should point towards the Primary Mirror (13). Replace the nuts, and securely tighten the Finderscope and bracket assembly in place.

4. Attach Accessory Tray

Locate the Accessory Tray (9). Using the accessory tray bolts, wing nuts and washers connect the Accessory Tray Braces (8). Start with one tripod leg and attach wing nuts. Wing nuts should be positioned beneath the accessory tray. Do not tighten wing nuts until all Accessory Tray Braces are attached as some adjustments may be required.

Your Telescope is now ready to be used. To obtain the fullest enjoyment from your telescope, please refer to the additional information below.

Technical data:

Primary Mirror diam: 3" (76 mm)
Focal length: 700 mm
Eyepieces: 4 mm, 12.5 mm, 20 mm
2X Barlow
Max. Magnification: 350X
Finderscope: 5X24 mm

Eyepiece survey and theoretical strengths:

Eyepiece	Strength	Strength with 2XBarlow
4 mm	175 X	350 X
12.5 mm	56 X	112 X
20 mm	35 X	70 X

HOW TO USE YOUR NEW TELESCOPE

Selecting an Ocular Lens:

1. You should always start viewing with the lowest power eyepiece, which in this case the 20 mm lens.

   Note: the base power of each ocular lens is determined by the focal length of the telescope objective lens, which for the model is 700 mm. A formula can be used to determine the power of each eyepiece: Telescope OBJECTIVE lens (Primary Mirror) focal length EYEPIECE focal length = MAGNIFICATION (e.g. Using the 20 mm lens, the calculation would look like this: 700 mm ÷ 20 mm = 35X or 35 power. If you use 2X Barlow together with the 20 mm lens, the magnification would be 70X (2X35) or 70 power.)

Focusing Telescope:

1. After selecting the desired Eyepiece (3), aim Main Telescope Tube (14) at a land-based target at least 900 m away (e.g. a telescope pole or building). Fully extend focusing tube by turning Rack and Pinion Focusing Mechanism (2).
2. While looking through selected Eyepiece (3) (in this case 20 mm), slowly retract focusing tube by turning Rack and Pinion Focusing Mechanism (2) until object comes into focus.

Aligning Finderscope:

1. Look through Main Telescope Tube (14) and establish a well-defined target. (see focusing telescope section) tighten the Stabilizer Bar Mounting Screw (11) and Azimuth Lock Screw (5) so that telescope's aim is not disturbed.
2. Looking through finderscope, alternate tightening each Finderscope Adjustment Screw (17) until crosshairs of finderscope are precisely centered on the same object already centered in main telescope tube's field of view.
3. Now, objects located first with Finderscope (1) will also be centered in the field of view of the Main Telescope Tube (14).

Never Look Direct At The Sun With Your Telescope. Permanent Damage To Your Eyes May Result.

Enjoying Your New Telescope

1. First determine your targeted object. Any bright object in the night sky is a good starting point. One of the favorite starting points in astronomy is the moon. This is an object sure to please any budding astronomer or experienced veteran. When you have developed proficiency at this level, other objects become good targets. Saturn, Mars, Jupiter and Venus are good second steps to take.
2. The first thing you need to do after assembling the telescope as planned is center the desired object in the finderscope cross hairs. Provided you did a reasonable job aligning the finderscope, a quick look through the main telescope tube at low power should reveal the same image. With the lowest power eyepiece (the one with the largest number printed on it) you should be able to focus the same image that you saw through the finderscope. Avoid the temptation to move directly to the highest power. The low power eyepiece will give you wider field of view, and bright image – thus making it very easy to find your target object. At this point, with a focused image in both scopes, you've passed the first obstacle. If you don't see an image after attempting to focus it in, you might consider aligning your finderscope again. Once you pass this step, you'll enjoy the time spent ensuring a good alignment. Every object you center in the finderscope will be easily found in the main telescope tube, which is important for continuing your exploration of the night sky.
3. The low power eyepieces are perfect for viewing the full moon, planets, star clusters, nebulae, and even constellations. These should build your foundation. However, for more detail, try bumping up in magnification to higher power eyepieces on some of these objects. During calm and crisp nights, the light/dark separation line on the moon (called the "Terminator") is marvelous at high power. You can see mountains, ridges, and craters jump out at you due to the highlights. Similarly, you can move up to higher magnifications on the planets and nebulae. Star clusters and stars are best viewed through the lower power no matter what.

4. The recurring astronomical theater we call the night sky is an ever-changing billboard. In other words, not the same movie plays all the time. Rather, the positions of the stars change not only hourly as they seem to rise and set, but also throughout the year. As the earth orbits the sun our perspective on the stars changes on a yearly cycle about that orbit. The reason the sky seems to move daily just as the sun and the moon "move" across our sky, is that the earth is rotating about its axis. As a result you may notice that after a few minutes or a few seconds depending on what power you are viewing at, the objects in your telescope will move. At higher magnifications especially, you will notice that the moon or Jupiter will "race" right out of the field of view. To compensate, just move the fine adjustment controls on your telescope to "track" it in the necessary path.

Helpfull Hints

1. Your telescope is a very sensitive instrument. For best results and fewer vibrations set your telescope up on a level location on the ground rather than your concrete driveway or your wooden desk. This will provide a more stable foundation for viewing, especially if you've drawn a crowd with your new telescope.
2. If possible view from a location that has relatively few lights. This will allow you to see much fainter objects. You'd be surprised how much more you'll see from your local lake or park when compared to a backyard in the city.
3. Using your telescope out a window is NEVER recommended.
4. View objects that are high in the sky if possible. Waiting until the object rises well above the horizon will provide a brighter and crisper image. Objects on the horizon are viewed through several layers of earth's atmosphere. Ever wonder why the moon appears orange as it sets on the horizon. It's because you are looking through a considerable more amount of atmosphere than you would directly overhead. (Note: If objects high in the sky are distorted or wavy, you are probably viewing on a very humid night.) During nights of unstable atmosphere, viewing through a telescope can be frustrating if not impossible. Astronomers refer to crisp, clear nights as nights of "good seeing".
5. Sudden changes of temperature

   If possible you should avoid to take your telescope from the cold outside temperature into the room temperature. This will cover the lenses with condensed moisture, a condition, that has to be corrected immediately. To do this, place the lens at a safe distance from a source of heat and increase the heating slowly, until the moisture disappears. If any stains are left on the lenses, these have to be removed after the lenses are fully dried. In cold weather the telescope should be placed outdoors at least one and a half hours before you want to use it.